E X E C U T I V E S U M M A R Y
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UNION CARBIDE CORPORATION

Hecla Shaft
Sections 5, 6, and 32
T. 28 and 29S., R. 24E.
San Juan County, Utah
ACT/037/043

LOCATION:

Union Carbide Corporation proposes to develop an underground, random room-and-pillar, single vertical shaft entry uranium mine 3.2 miles west of La Sal, Utah. The mine facilities will be located in an area previously disturbed by a gravel operation.

SOILS AND GEOLOGY:

Ore will be mined from the Salt Wash Member of the Morrison Formation six to nine hundred feet below the surface.

Soils at the site have been removed by the previous gravel operation.

HYDROLOGY:

There are no perennial streams immediately adjacent to the mine site. An ephemeral channel, however, does run adjacent to the site and may be used as a waste-rock disposal site. If this is done, the channel will be diverted and the dump protected from erosion.

Groundwater occurs in the surficial gravel alluvium and the immediately underlying Dakota Sandstone and Burro Canyon Formation. The single vertical shaft entry will be concrete lined and if groundwater is encountered during the drilling of vent holes grout will be used.

ECOLOGY:

The mine site is located in the Sagebrush-Native Grass community. Pinion and Juniper occurs in patches.

Because the mine site is adjacent to a well used highway impacts on wildlife should be minimal.

STRUCTURES AND FACILITIES:

Proposed Structures and Facilities include the following:

a. One single concrete-lined vertical shaft entry.

b. A seven foot diameter venthole to serve as an escapeway.

c. 5 additional ventholes.

d. A waste-rock dump.

e. Approximately 4800 feet of access roads.

f. Undetermined number of buildings such as a hoist-house, shop, and offices.

MINING AND RECLAMATION:

Enclosed is a copy of Union Carbide's narrative concerning their Mining and Reclamation Plan.

IMPACTS:

The mine facilities should have miner impacts on the environment. The Reclamation Plan will eliminate safety hazards and minimize visual and environmental impacts.

A groundwater pillation problem was investigated in the past that may have been caused by Union Carbide's drilling. Soap and oil were reported in the well water of a local resident. The problem no longer exists.

The La Sal-Snowball Mine is similar to the proposed Hecla Mine and it is located near the Town of La Sal. There have been no impacts reported to this Division from the mine.

SURETY ESTIMATE:

Surety has not yet been estimated.

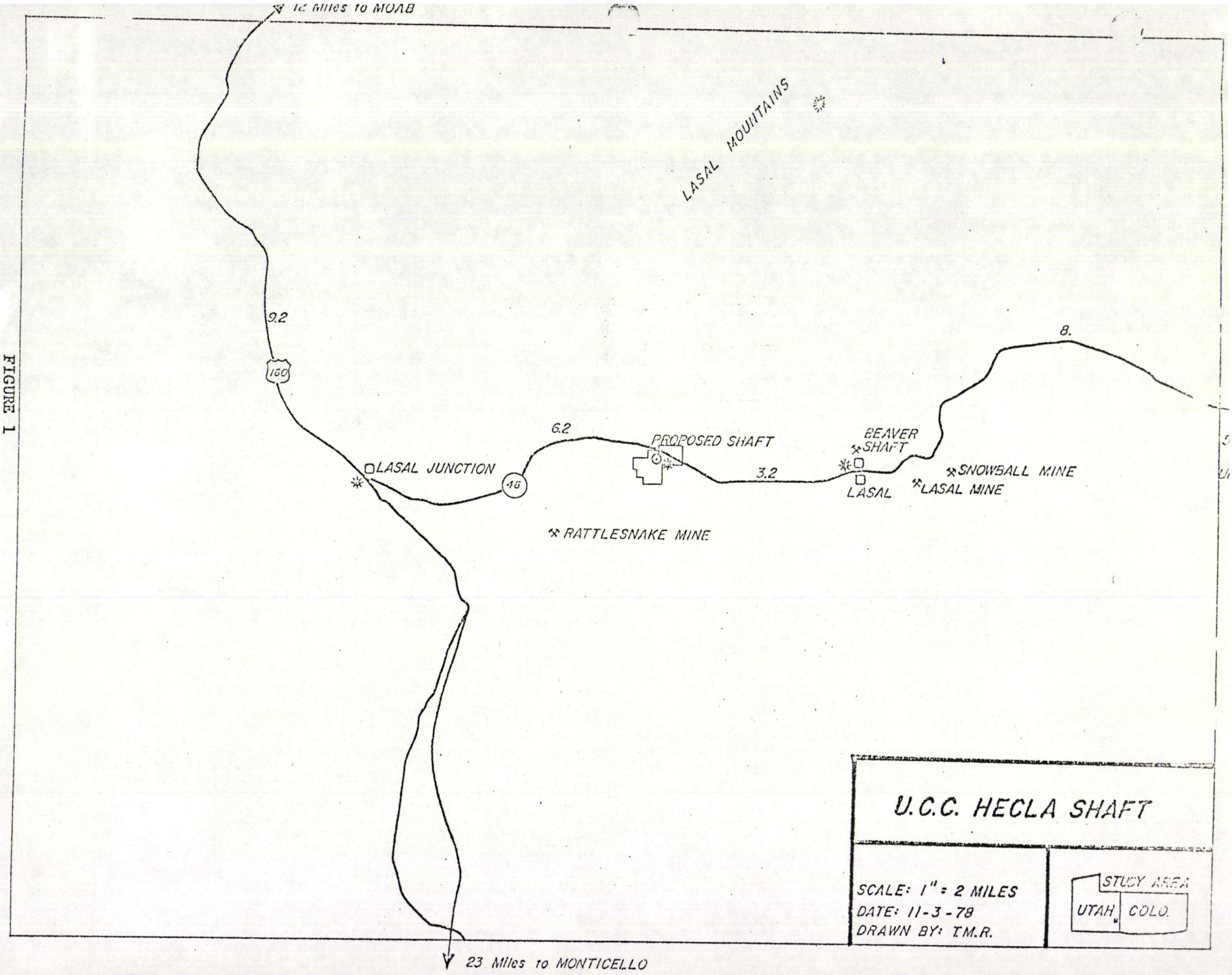
12 Miles to MOAB
LASAL MOUNTAINS
9.2
160
8.
6.2
PROPOSED SHAFT
BEAVER SHAFT
LASAL JUNCTION
3.2
SNOWBALL MINE
LASAL MINE
LASAL
RATTLESNAKE MINE
23 Miles to MONTICELLO
U.C.C. HECLA SHAFT
SCALE: 1" = 2 MILES
DATE: 11-3-78
DRAWN BY: T.M.R.
STUDY AREA
UTAH
COLO.

FIGURE 1

HECLA SHAFT

MINING PLAN

The uranium ore occurs in the Salt Wash sandstone member of the Morrison Formation six to nine hundred feet below the surface. Mining will be conducted in a sound technical and prudent miner-like fashion utilizing a random-room and pillar technique.

A single concrete-lined shaft entry is proposed in the NE¼ of Section 5, T29S-R24E for 1979. Development headings will then be driven to the east and to the west. A seven foot diameter venthole will be drilled and lined in 1980 to serve also as a second escapeway. At least five or more ventholes 5, 7, or 8 feet in diameter are anticipated during the life of the mine. **(See Figure 5)**

The shaft site and main ancillary facilities will be located in an abandoned gravel pit. Some earth moving will be necessary to accomodate the construction of these surface facilities. Since the surface is already disturbed very little vegetation or topsoil will be affected. However, topsoil will be stock piled and stabilized where practical in these and future construction operations.

Waste rock generated from mine development will consist of sandstone and mudstones and will be deposited in the old gravel pit workings to the east. When this area is filled, mine waste will be deposited to the south of the shaft following a natural depression to the southwest. Where practical topsoil affected by site expansion will be salvaged and stock piled.

Normal "over the edge" waste dumping will tend to naturally sort the waste materials with the larger rock materials rolling to the bottom, thus forming a free draining waste pile with an observed angle of repose of 35 deg. Past experience indicates that slope stability should not be a problem.

The waste rock is expected to be similar to that of the La Sal - Snowball. Testing by Colorado State University found the La Sal - Snowball mine wastes to

be capable of supporting salt tolerant vegetation, with a ph of 7.8 and to be low only in phosphous with the trace elements present.

There are no natural water bodies in the area other than epherneral drainage channels. Some ditching may be necessary to reroute a meandering drainage channel around the proposed waste dump in the old pit area east of the shaft.

The shaft site is located a few hundred feet away from Utah Highway 46 and will be serviced by rebuilding the existing pit access road. Some access roads may be constructed or rebuilt to service future ventilation sites. All roads built or modified will be constructed so as to insure proper drainage and erosion control.

HECLA SHAFT

RECLAMATION

Upon final abandonment of the mine, surface debris, scrap metal, discarded wood and other materials will be buried or removed from the site. The headframe, buildings and other surface facilities will be dismantled and removed. The shaft and ventilation holes will be sealed with suitable concrete-steel covers to prevent accidental or unauthorized entry.

Dumps, pads, and other disturbed areas will be stabilized. Stabilization will consist of rounding of the outer edges of the dumps and pads, reducing the slope of waste rock faces and regrading of drainage contours on the affected areas. Topsoil and overburden will be spread back over these areas where possible. Roads will be graded to match the existing topography.

Compacted surfaces will be scarified, and seeded as recommended and then drag covered. Seeding will preferably take place in the fall. At present there are no plans for the addition of a fertilizer. However, should revegetation tests prove soil amendments significantly helpful in establishing vegetation, then amendments and other proven surface techniques will be employed.